

## The Lakehead Manifesto: Principles for Research and Development in the North

Rapid changes affecting northern ecosystems and peoples are many and varied: demand for land and resources; expanding infrastructure and industry; global warming; pollution of land, air, and water from both distant and local sources; new and invasive species; and increasing human population growth and migration. The consequences of these changes include reduced ice and snow cover; permafrost thawing; erosion; rising sea levels; increasing contaminant levels; diminished native biodiversity; risks to human health, welfare, and infrastructure; and lost cultural and linguistic identity. Although capacity within the North to address and manage the consequences of change is improving, the North does not exist independent of other regions, and human impacts on the Arctic are harbingers of impending change elsewhere. The causes and consequences of rapid change are shared by humans and ecosystems at all latitudes.

Bearing these points in mind, Lakehead University's Centre for Northern Studies organized a symposium and workshop entitled "Rapid Change and the Future of Canada's North" (Thunder Bay, Ontario, Canada, 15–16 March 2013). It became apparent during the workshop, and notwithstanding previous attempts to establish ethical standards for northern research (e.g., NSF-OPP, 1997; IASSA, 1998; ACUNS, 2003; ICSU-WMO Joint Committee, 2011), that there is a pressing need for a single, comprehensive, and readily available document outlining the key guiding principles for research and development in the circumpolar North. We thus provide our list of 10 principles, designed to serve the collective interests of all peoples, that we hope will gain wide acceptance and use by governments, agencies, industry, researchers, and others working and living in the North.

1. All proposed actions that might damage or increase risk to northern systems, species, populations, habitats, or peoples, including policies, regulations, and legislation, must abide by the precautionary principle—proponents of change must demonstrate the absence of harm—as reflected by local, national, and international custom.
2. The search for and dissemination of knowledge must be shared among all nations and peoples, and all persons must be allowed to communicate knowledge freely and openly.
3. Proposed actions and decisions about the North must be informed by independent councils of qualified advisors, based on science and knowledge rather than socio-political ideology, economic expediency, or national self-interest, and with respect for diverse worldviews.
4. Actions must be evaluated in the context of short- and long-term consequences and local and distant impacts, as well as direct and indirect effects, including the cumulative and interactive effects of multiple stressors.
5. Actions, decisions, and policies must recognize the intimate interconnections of polar environments and northern peoples with environments, ecosystems, and societies elsewhere on the planet.
6. Citizens must have adequate opportunities to become literate in the knowledge required for informed decision making for the North, and they must have the opportunity to contribute meaningfully to government policies and to decisions on potential actions planned by governments, industry, and other proponents.
7. Data collected in the public domain, in the context of public good, through common resources, on public land, or with public funds must, after a reasonable time, be made freely available for analysis and scrutiny by other qualified professionals and the public. The use of public data carries the responsibility to ensure that the data are used appropriately, that they are analyzed and interpreted fairly, that the results and interpretations are communicated honestly and freely, and that those persons who collected the data are properly notified and acknowledged.
8. Nations and governments must be accountable for their actions that violate international treaties, multilateral agreements, and domestic policies, as well as their failure to conform to those treaties, agreements, and policies through inaction.
9. Nations and other governments must work to expand and sustain funding for northern research, coordinate and streamline logistic support, and cooperate on research themes of common interest.
10. Northern nations must communicate, to other nations and to all citizens, the value of understanding and protecting northern environments, peoples, and cultures.

REFERENCES

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